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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/991,164	11/16/2001	John C. Weast	10559-550001/P12570	3532

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EXAMINER

PERVEEN, REHANA

ART UNIT	PAPER NUMBER
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2116

DATE MAILED: 05/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/991,164

Applicant(s)

WEAST, JOHN C.

Examiner

Rehana Perveen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2-6, 11-26 and 31-42 is/are allowed.
- 6) ☒ Claim(s) 1, 7, 8 and 27-30 is/are rejected.
- 7) ☒ Claim(s) 9 and 10 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Response to Amendment

Allowable Subject Matter

Claims 2-6, 11-26, and 31-42 are allowed over the prior art of record.

Claims 9 and 10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

Applicant's arguments with respect to claims 1, 7, 8, and 27-30 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 8 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically, claim 8 recites the limitation "receiving user input requesting that the buffered write operations be committed to non-volatile storage". Claim 7, parent claim of claim 8, recites the predetermined condition to be one or more of the limitations including the limitation of claim 8. Claim 7 should positively recite the

detecting limitation concerning subject matter of claim 8 in order for claim 8 to be properly dependent. Appropriate correction is therefore required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1, 7, 8, and 27-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Khan et al, Patent No. 6,807,595.

Khan et al were cited as prior art in the previous office action.

As to claims 1 and 27, Khan et al teach receiving a request to perform a write operation to a device (interrupt request which may perform transfer control to a routine

to carry out an instruction to cause a write operation, col. 7 lines 9-10), determining whether the device is activated or inactivated (power shut-down mode or not, col. 7 lines 9-11), accessing the device to perform the requested write operation if the device is determined to be activated (inherent, col. 7 lines 9-13), and buffering the write operation to physical memory (storage unit 142) if the device is determined to be inactivated (col. 7 lines 9-26 and col. 8 lines 17-48).

Khan et al do not expressly teach the device being a file system device or a non-volatile storage device. Khan et al teach the device being a microprocessor. It would have been obvious for one of ordinary skill in the art at the time of the invention to modify the teachings of Khan et al to allow other devices to buffer write requests when the particular device is inactive. One of ordinary skill in the art would have been motivated to utilize Khan et al's request buffering technique within a number of types of other devices since such technique would result in enhancing overall system performance by reducing power consumption (Khan et al, col. 2 lines 24-33).

As to claims 7 and 29, Khan et al teach all of the limitations as stated above. In addition, Khan et al teach writing one or more buffered write operations to the device upon an occurrence of a predetermined condition (interrupt servicing upon powering up, col. 7 lines 9-26 and col. 8 lines 17-62). Further, Khan et al teach the predetermined condition comprises detecting that a predetermined amount of time has elapsed (col. 7

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lines 9-21), or detecting that a computer system associated with the device is being turned off or put in a stand-by state (power save mode, col. 7 lines 9-21).

As to claim 8, Khan et al teach receiving user input relating to one or more predetermined conditions (col. 9 lines 18-27).

As to claim 30, Khan et al teach information for causing a machine to deactivate the device after writing the one or more buffered write operations (col. 8 line 63 - col. 9 line 59).

Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Khan et al as applied above, in view of DeKoning et al, Patent No. 6,412,045.

DeKoning et al were cited as prior art in the previous office action.

As to claim 28, Khan et al teach all of the limitations as stated above. However, Khan et al do not expressly teach determining whether the non-volatile storage device is operating under battery power. DeKoning et al teach determining whether a non-volatile storage device is operating under battery power during write operations to allow caching in the event of power failure (col. 5 line 40 - col. 6 line 11).

It would have been obvious for one of ordinary skill in the art at the time of the invention to combine the teachings of Khan et al and DeKoning et al because both are commonly directed to handling of storage device write operations in consideration of power condition, and DeKoning et al's determination of whether the device is operating under battery power, when incorporated into Khan et al's system, would have enabled Khan et al's system to achieve further indication of power condition to allow overall system efficiency.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rehana Perveen whose telephone number is 571-272-3676. The examiner can normally be reached on Monday - Thursday 8:00am - 6:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynne H. Browne can be reached on 571-272-3670. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to be 'Rehana Perveen', written over the printed name.

Rehana Perveen
Primary Patent Examiner
Technology Center 2100